

Technique of Decision Seminars

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I

ONE MARK of the accelerated rate of development in political and legal studies, as indeed in all branches of knowledge, is the appearance of new patterns of university instruction and inquiry. The RAND Corporation took the initiative in adapting the technique of war gaming to the consideration of diplomatic questions, and this has led to a crop of promising extensions into education and business as well as government.¹ As originally conceived the games method was not primarily aimed at the in-service training of diplomats or the pre-service preparation of students of national government or international politics. It was intended to yield immediately important policy results by modifying the perspectives of key policy advisors and decision makers. However, the pedagogical significance of the technique was so obvious that diffusion began at once into the university world.²

Another device has had less immediate impact upon thoughtful

¹ Herbert Goldhamer and Hans Speier, "Some Observations on Political Gaming," *World Politics*, 12 (October, 1959), 71-83.

² Goldhamer and Speier mention Northwestern, Columbia, MIT, and West Point.

teachers, although it is now a favorite instrument among some executives in business and other big-scale organizations. I refer to "brain-storming," an adaptation to group action of the free association technique originally employed by Freud for therapeutic purposes.³ The idea is to create a permissive social environment in which individuals have the courage to break out of conventional stereotypes of thought. Brain-storming has something in common with "buzz sessions" in which, for instance, large gatherings may be broken up for private, small-group consideration of a subject, free of the intimidating necessity of addressing a large audience every time anyone opens his mouth.⁴

Another suggestive set of models has come from the theory and practice of role playing. In fact, role playing devices have been well established here and there even at the professional level. Law schools employ moot courts to give students a foretaste of the realities of litigation. At the end of the last century Paul Reinsch of the University of Wisconsin took the lead in encouraging students to simulate legislative and other organs of government; and the record indicates that these activities follow rough cycles in the curve of academic popularity.

There is ground for predicting that our traditional ways of doing things are entering upon a phase of more rapid change, less as a result of new educational "gimmicks" than as an example of the fact that the scientific conditions of problem solving are better understood. I referred above to Freud and psychoanalysis; and tribute must be paid to the emphasis put upon unconscious factors and upon new intellectual tools capable of fostering insight and creativity. Freud was not a "small group" man; as he practiced psychoanalysis Freud limited it to a "pair" relation between therapist and patient. It was for subsequent investigators to try to master the enormous potential of small-group management for therapy.

³ A. F. Osborn, *Applied Imagination: Principles and Procedures of Creative Thinking* (Rev. ed.; New York: Scribner's, 1957).

⁴ The permissive approach to audience participation in part reflects the guidance approach of Carl Rogers and others. See Carl R. Rogers and Rosalind F. Dymond (eds.), *Psychotherapy and Personality Change* (Chicago: University of Chicago Press, 1954); Samuel R. Slavson (ed.), *The Practice of Group Therapy* (New York: International Universities Press, 1947).

Among the many contributors to the technique of problem solving (or, at least, problem tackling) groups are to be named Kurt Lewin,⁵ J. L. Moreno,⁶ and their students.

More than scientific progress has contributed to the present re-examination of educational method. A very considerable reorientation has been going on in the conception of the functions proper to scholars in society, and especially to political thinkers and investigators. As usual the perspective that people are seeking to express is phrased in many ways. We can, for instance, join with those who say that intellectuals are becoming more future minded; and this formulation undoubtedly captures important points. It refers to the concern of men of knowledge with both the threat of disaster that is suspended over mankind and the state of present knowledge of the conditions and strategies whereby a united world can be non-coercively achieved.

Another way to phrase the matter is that whatever else they are, intellectuals are grapplers with the basic problems of living on a particular planet in an identifiable configuration of time and space. The intellectual community is more than a sum of specialists; it is a collective social operation. The operation continually affects goals, trends, conditions, projections, and alternatives. By becoming more acquainted with the image of the whole—which includes the future along with the past—intellectuals, and especially professional students of the political process, can hope to increase the realism, comprehensiveness and timeliness of the total enterprise.

How can this image of the whole be achieved and transmitted *among* intellectuals and *between* intellectuals and other components of the local, national and world community? I suggest that this is the question lurking near the surface of our preoccupation with methods of university instruction and research. The technique of gaming, for example, was applied to diplomatic questions for the

⁵ See especially Kurt Lewin, *Field Theory in Social Science, Selected Theoretical Papers*, ed. by Dorwin Cartwright (New York: Harper, 1951).

⁶ Jacob L. Moreno, *Who Shall Survive? Foundations of Sociometry, Group Psychotherapy and Sociodrama* (Revised ed.: Beacon, N. Y.: Beacon House, 1953). Harold Guetzkow, "Building Models about Small Groups," in Roland Young (ed.), *Approaches to the Study of Politics* (Evanston: Northwestern University Press, 1958).

purpose of bringing the world picture to the focus of attention of those who offer advice on U. S. policy. Brain-storming concerns itself with the creative component of decision, with the encouraging of new and undreamed-of combinations. Role simulation in courts, legislatures, or other bodies is intended to provide a fuller experience of a relevant social context than most people can obtain when they read or listen to lectures, or watch other people perform.

II

The general proposition is this: *It is increasingly perceived that modes of group problem solving are needed that improve the probability of realistic, comprehensive and timely solutions.* Suitable methods are required for preprofessional and professional use by scholars and decision makers.

For convenience we refer as follows to the five intellectual tasks involved in problem solving: clarification of goal, description of trend, analysis of conditioning factors, projection of future developments, invention and evaluation of alternatives. From one point of view this classifies the *contents* of a problem; from another standpoint, the categories are *procedural* since they guide the order-in-time for the consideration of a problem. It is important to apply both kinds of principles.

War or diplomatic gaming technique has several advantages over older types of seminar method. For one thing, the participants are always active; it is less easy for them to become passive and torpid than in conventional seminars. For another, the habit of acting with tentative decisiveness is cultivated. Participants must commit themselves provisionally about the future. The rules of the game are applied by umpires who play the future role of "Nature" or "Destiny"; and the rules require definiteness in place of the vagueness that is so often confused with "good judgment." Creativity is encouraged by the premium put upon successful invention. Motivations to study past events are kept high since the uses of history are demonstrated by the search for suggestive likenesses and differences. Furthermore, new scientific hypotheses are germinated in the light of new factor combinations; and scientific procedures are

adapted to the task of improving the inflow of information *about* the future *through* the future.

Stimulating as the technique of gaming is, it is not without limitations. Players are tempted to develop "umpire consciousness" and to adapt their solutions accordingly. But the care and feeding of umpires is not among the principal skills of responsible advisors. Presumably the advisor's role in the actual policy process is to substitute for the umpires, who are non-existent in reality. Hence gaming technique needs to be supplemented by methods that give no one the last word—since the last word is spoken only as future events unfold.

III

Among the promising lines of development that have begun to modify education we cannot fail to mention film, radio-TV, and other "audio-visual" aids. Medical education in particular has benefited from devices which make it possible to magnify delicate surgical interventions. Similarly, techniques of visual magnification (or reduction) have contributed to the regular training of physicists, chemists, biologists, geologists, and astronomers.

An important factor that expedited the use of audio-visual instruments for educational purposes in the medical and physical sciences was the library of research material that was early gathered in those fields. "Cloud chamber" phenomena in physics, for example, were promptly photographed as original data. Quite early in educational film developments top figures in the exact sciences chose *clips from research films* or *cooperated in the filming of research demonstrations*. A film on digestion, for instance, would show the laboratory apparatus applied to the observation of gastric phenomena. Films on astronomy used photographs from the principal observatories. If the subject was history, however, the frame of reference drastically changed. Educational films would use actors to dramatize the Mayflower Compact, or the Constitutional Convention, or families trekking westward. (Costumes and other physical objects might be authentic.) Even at the secondary school level the emphasis was upon the "story" and *not upon the historian's method of inference*. The film was not teaching the science

or the technique of history as an intellectual discipline; rather, it was transmitting the folklore of the nation, though somewhat restrained by scholarly criticism.

Even in regard to contemporary affairs scholars in history, political science, economics and sociology have been remarkably slow to use audio-visual means for research purposes. Instructional films that deal with contemporary history often incorporate "documentary" elements from newsreel libraries. But news photographers are rarely historians, political scientists or economists; and in the exceptional case that a cameraman has had special training in these disciplines he is not guided by scientific principles when he is photographing current events. Historians and social scientists, unlike astronomers, have not regarded it as part of their responsibility to make a documentary record of contemporary developments for scientific purposes. We have not developed social observatories. Hence photography has been haphazardly employed in order to give "human interest" to instructional films rather than as a means of providing authentic material adapted to expositions of method and results.

The undeniable advantages of photography and sound recording have been successfully exploited wherever social scientists have felt a sense of "psychic distance" between themselves and a field for observation. Social anthropologists, for instance, have experimented with visual and auditory documentation as aids to field work in folk societies. This is a true research use of the new media; and the archives that contain this material provide a "data bank" available for instructional purposes. When properly edited, instructional films in social anthropology compare favorably in intellectual content with corresponding films in the physical sciences.

Today it is trite to recognize that a written record is subject to limitations which do not apply, or apply less drastically, to auditory and pictorial documents. A written interview synopsis brings the observer's selectivity into play at a very early stage in the recording of basic data. Even verbatim records obtained by shorthand are far from satisfactory for many purposes since they do not include the vocal pattern, which is often a significant guide to culture, class, personality and cognate variables. Verbal descriptions of ceremonial

operations can be made much more brief, accurate and comprehensive when they are part of a record that includes motion pictures and sound. The skilled use of *all* media can provide an important record for both research and instructional purposes.

By the use of sampling methods it is possible to employ the new media to bring to the focus of attention of student, research worker, advisor or decision maker a vivid, faithful image of a total context, an image superior in all salient characteristics to the results obtained when reliance is put upon words alone, or for that matter, upon any medium of communication taken separately.

Complex audio-visual-print images (AVP images) have important advantages for the study of the decision process itself, as well as for the technique of decision making. AVP images lend themselves to *continuing awareness of space-time dimensions*; and these, as we know in the historical and social sciences—and increasingly in all science—are crucial. AVP images have the further advantage of permitting an abstraction to be closely related to empirical observation. In any context that is pertinent to community policy it is perilous to lose sight of the connection between the *observer-as-generalizer* and the *observer-as-primary-recorder*. Primary records are less distinct than “concept” terms imply. The general term “capital investment,” for instance, may be used to refer to the building of a dam across a stream. Primary observation of dam building indicates how much more the operation includes than is designated by the “investment” label. In an original film record one may catch glimpses of the ceremonies required to appease the spirits of Nature and to move new shrines away from their traditional spots. There may be indications of how the family cemeteries or temples are in process of re-location. Perhaps the crowds on the sidelines suggest that the economic cost was more than the out-of-pocket cost of wages and materials, since production for miles around may have been reduced to half speed as workers ran back and forth to watch the engineers (and so on).

It is more urgent than ever under present day conditions to keep empirical take-offs at the focus of attention of decision makers, advisors, and others. Among the spectacular developments of modern civilization are statistical and scientific procedures which

condense and generalize empirical data. Heaped above the data sentences of primary observers are tiers of sentences that possess various degrees of generality. Typically the internal patterning of these systems is skillfully executed, since the level of mathematical and logical training has been rising in recent years. But decision makers are necessarily totalistic in their orientation. They must keep glancing out of the corners of their eyes to see whether the "take off" and "landing strips" of theoretical flights are recognizable. AVP images are a great help in making such estimates.

Because AVP images condense information without losing context they are important *storage and recovery devices* which serve the purposes of memory and recall. The same point applies to the connection between descriptive knowledge of any kind and society as a whole. AVP images increase the potential speed of the operations by which the decision makers of society can have pertinent information brought to their notice at the moment when motivations are highest to give it consideration.

Many scholars and scientists are busily engaged in adapting new theories and new engineering know-how to information storage and retrieval with the aid of machines.⁷ This is the most recent and impressive indication that the "industrial revolution" has not only transformed the power plant, the factory and the kitchen, but has at last reached into the ivory tower (and touched the ivory domes). The same questions arise in regard to machines as were raised in reference to sophisticated modes of summarizing and generalizing mathematical and statistical relationships. For instance: What are the empirical contexts? What is the relationship between the events at the focus of attention of the initial observer and the records transmitted from stage to stage as data and interpretation? How are the empirical references at the terminal stage related to the

⁷ For example, J. W. Perry and A. Kent, *Tools for Machine Literature Searching* (New York: Interscience Publ., 1958). Machine programming is intimately connected with the recent advances in symbolic logic. Of great interest to political scientists as well as lawyers is Mull, *The Quarterly Newsletter of the Electronic Data Retrieval Committee of the American Bar Association*, edited at the Yale Law School by Layman E. Allen and others, 1959—. Machines can also be adapted to teaching. See the succinct summary given by the great innovator in this field, B. F. Skinner, "Teaching Machines," *Science*, 128 (October, 1958), 969-71.

starting point? AVP images are as much needed here as elsewhere in decisions.

Besides performing storage and retrieval functions, AVP images aid *imagination*. Since policy is a choice among future events, the role of imagination in the decision process is large. AVP images provide enough contextuality of reference to keep policy makers and executives in closer touch with reality than where images of the kind are missing.

IV

Educational methods are also influenced by the use of *simulation models*. For years it has been necessary for engineers to use models in the shape of wind tunnels, bridges, dams, electric generators, and transmission towers. For a moment, at least, such a model is a "frozen policy," a potential arrangement of mass and energy which is open to critical evaluation. In social policy the operations most closely linked with engineering—like city or regional planning—have been accustomed to regard the preparation of models as an indispensable part of the decision process. But social and behavioral scientists, in general, have been dilatory in perceiving the advantages of model building. This comes, in part, from failure to bridge the theoretical gap between the "thinglike" character of a bridge or an engine, and the "symbolic" dimensions of a legal decision or an administrative order. Properly conceived, however, the likenesses deserve more attention than the differences. In truth a machine is never adequately designed unless it allows for human beings to guide and repair it. Designers must think of "man-machine" combinations when they project an automobile, an aircraft, or an assembly line.

It is also true that legal and administrative policies are never as purely symbolic as they appear to be at first glance. Any comprehensive study of a decision by the Supreme Court or of a vote in Congress must place these events in a total sequence of interaction. Behind every vote lie participants who used strategies to influence the outcome; and following all outcomes are effects that may be described in political, economic, and other value terms. To some degree the whole social process is necessarily implicated.

It is reasonable to say that among social scientists, political sci-

entists and lawyers have been slow to use the model building technique of the engineers because political scientists are especially aware of the complexity of the social process. (Unfortunately this explanation does not apply to scholars who shrink from examining social contexts, and who escape into formalism).

The most promising answer to the challenge of complexity is not to ignore the challenge but to devise ways of meeting it. The advances that have been made in audio-visual technique, machine computation and model building together permit a new, direct approach to the presentation of selected past, present and future events. Not the individual device but the coordinated application of all available instruments is the indicated strategy.

More specifically, how can we translate the contextual requirement of decision making into workable terms? The reply is two-fold: By sampling the decision process as a whole; by adapting all available means of presentation to the problem.

V

Consider the questions that come up when a political scientist thinks of the vast process of decision for whose investigation he is responsible. The decision process is worldwide. No matter how reluctant the individual scholar may be to acknowledge the obligation it is impossible to sidestep indefinitely the challenge of examining the politics of every local unit, every metropolitan area, and every nation. This carries one relentlessly to the world arena as a whole. The school taxes of the most inland district in the American mid-continent are affected by the interplay of the locality with its wider economic setting; and also with the ebb and flow of influence among White and Black, European and African, Asian and American, and so on through the long inventory of civilizations, classes, and interests that figure in the coalitions of active politics.

How is it possible for the political science profession to cope with the gigantic arena of global affairs without losing sight of the local school board and its problems?

Obviously there must be a division of labor among political scientists whereby members of the profession focus upon component

parts of the whole. Everyone admits that no matter how the task is subdivided in detail some emphasis must be given to the territorial frame of reference and some to "horizontal" ("functional") relations. The globe is divisible on a territorial (community) basis; and each community is reclassifiable in functional terms. Neither set of categories can be exclusively applied, since the facts of the social process are matters of relative emphasis, not dichotomous separation. When we think of the U. S. or of any nation-state as a territorial community it is obvious that many persons who are identified as Americans are outside its legal limits at any given moment and also that many non-Americans are inside the formal boundaries of the U. S. When we examine the political parties or pressure groups that affect policy in the U. S. at any given time, we must recognize that influences originating outside the country are not wholly irrelevant. Similarly, everyone sees that we do not—and cannot—restrict our impact upon the policies of other peoples to our legal boundary lines.

I have repeated these truisms since they define the scope of political science and imply the means by which the discipline can be made manageable. The division of labor is indispensable; and the division needs to be made according to a rational conception of how the world political process can be sampled. Plainly the sampling must be done according to the principal foci of the decision process, territorial and functional.

If one examines the catalogues of colleges and universities in this country and abroad it is obvious that political scientists are of one mind in adhering to the broad principles that have been repeated in the previous paragraph. Courses and seminars are, in fact, offered at international, comparative and national, and local levels; and on such functional lines of demarcation as public law, governmental organization, and politics. However widely political scientists diverge from one another in detail they are at least united in recognizing their responsibility for studying what is conventionally called government and politics on a global scale.

The inference is that if key seminars are to be effective in the existing framework of professional activity they must be organized around territorial units in the total decision process, and also around

functional units within these communities. A functional unit may be an official organ of government—such as the Congress, the Supreme Court, the Presidency—or a party, pressure group or other unofficial or semi-official structure. A functional unit may also be a stage or phase in a political process, hence unrestricted to a single organization. For instance, if we classify every decision process into seven basic phases for purposes of study, each of the seven phases may cut across several organizations, and also include unorganized activities.

VI

Assuming, then, that we have in mind a program of key decision seminars, what principles or techniques are applicable?

For one thing it is essential that a key seminar be conceived as *a continuing enterprise* that goes beyond the period of membership of any group of participants. The criterion of continuity emphasizes the possibilities for cumulative research and learning that such an operation affords.

Another point is to make sure that the seminar provides *an environment in which the decision process under study is presented as a whole and as continuous in time*. This principle refers to the continuity of the object of study, not the act of study. It emphasizes the importance of providing a highly selective environment at the attention of seminar members. A *recall* function is to be performed; that is to say, fundamental categories are used to remind participants of the salient features of the context.

The meaning of this requirement may be more apparent if we describe a highly provisional application of the technique that was made in reference to Vicos, the Peruvian hacienda administered for several years as a project of Cornell's Department of Anthropology. In 1954-55 four members of the Center for the Behavioral Sciences at Stanford organized a seminar to analyze and advise on policy regarding the future of Vicos. One member of the seminar provided most of the information. He welcomed the seminar as an opportunity to think through the policy alternatives open to him on the hacienda.⁸

⁸ Professor A. R. Holmberg was in charge of the Vicos Project. Other seminar

The seminar used the same room for its deliberations and divided up the wall space into sections which referred to various sectors of the social process in and around Vicos. For instance, one space was assigned economics; another politics; a third family and intimate affairs; a fourth safety, health and comfort; and so on until the entire social process was allocated. A line was drawn around the room at eye level ("1954"). Other lines were drawn below this to indicate the year when the Cornell intervention began, and to allow for entries relating to pre-Cornellian events. Above the midline was the future. As information was gathered about any given sequence of events a slip was tacked to the beaver board covering of the wall to serve as a continuing reminder of what had taken place. Maps, abstracts and guides to notes and bibliography were included. The space above the midline was used to record estimates of the future, assuming no change of policy, and estimated developments, assuming policy changes. The future was also characterized at selected cross-sections according to preferred value patterns (and specific institutional objectives). Each cross-section served as a rough model of the community.⁹

For purposes of ready reference we speak of the foregoing devices as *chart-room technique*. The fact that audio-visual devices are employed is not the vital point, but *the contextual use of audio-visual instrumentalities as continuing aids to storage, recall and imagination*.¹⁰

VII

The *fundamental intellectual* tasks to be performed in problem solving are furthered in seminar settings of this kind.

(1) *Trend reports*. A trend report describes a selected sequence of past events and raises questions relating to the weighing of sources, the fullness of available data, and the like. If the report

members were J. Kennedy, a psychologist then at RAND and now at Princeton, C. E. Lindblom, an economist at Yale, and the writer.

⁹ See A. R. Holmberg, "The Research and Development Approach to the Study of Change," *Human Organization*, 17 (Spring, 1958), 12-16.

¹⁰ RAND has been a creative center of simulation experiments. See Milton G. Weiner, *Observations on the Growth of Information Processing Centers*, RAND Corporation Paper 529 (Santa Monica, 1954).

is quantitative it poses such statistical issues as sampling and the presentation of time series.

(2) *Scientific reports*. We use the term “scientific” to designate reports that undertake to explain a given result in the light of theory and data. The task may be approached by case studies, correlational analysis, or experimentation. In practice few reports concerning trend [No. (1) above] are entirely devoid of scientific generalization or of attempted correlations. However, the methodological contrast between a chronology, on the one hand, and a time series analysis of the interrelation of votes and business cycles, on the other, is evident. The discussion of a scientific report deals with the clarity of the generalizations offered and with the degree of confirmation provided by the methods employed and the findings obtained.

(3) *Projection reports*. The reference is to estimates of the future on the assumption that the seminar has no influence upon events. Discussion relates to the methods of extrapolation used and the probability that an estimate of a given magnitude is high or low.

(4) *Goal reports*. The function of such a report is to offer a clarification of overriding policy objectives. Discussion can move in two directions: toward a consideration of the grounds of the goals put forward; toward explicit specification of goals in institutional terms.

(5) *Policy (alternative) reports*. A policy report invents or selects a policy, or a set of policy alternatives by which postulated goals can be achieved, and offers an evaluation of costs, gains and probabilities. Discussion may elicit new policy inventions or focus entirely upon criticizing proposed evaluations.

VIII

The seminar *agenda* is designed to harmonize the procedures open to the group during a given period which best enable the aims of the seminar to be accomplished. In general, the instructional purpose is to provide skill in the use of all available aids to problem solving.

(1) *The filing of independent estimates.* Since one objective of decision seminars is to orient the individual toward the future, an important place on the agenda is properly assigned to the obtaining of independent estimates by seminar members of future decisions. If the group is paralleling the Supreme Court, for example, estimates may be made of the probable response of the Court during the current term to the demands made upon it to accept or reject writs or to grant the claims advanced by plaintiffs or defendants. In regard to more remote time periods the problem is to estimate the type of litigation likely to reach the Court, and the Court's response. If the seminar is paralleling the Congress or a congressional committee the obvious estimates to be made are the bills likely to be approved during the current session (and the vote), and the chances of veto and repassage. Looking into the longer future the task is to predict the characteristics of the statutes likely to be approved during the years to come.

In order to facilitate independent judgment the individual can be asked to file his estimates with the clerk of the seminar, who keeps identities secret until authorized to divulge the information.

(2) *The consideration of estimates.* Individual estimates can be consolidated into a report by the clerk who—if the material is available in advance—may also prepare visual summaries. In this way contrasting expectations can be precisely set forth within the setting provided by the accumulated information already at the attention of the seminar. The ensuing discussion—in which the participants acknowledge their estimates or not as they see fit—provides an important test of everyone's expectations. At the end of the seminar each individual is requested to submit a revised estimate, if he so desires, which is kept confidential as part of the member's permanent file.

(3) *The reconsideration of estimates.* When a seminar has met long enough for some events which were once in the future to recede into the past of the members of the seminar, an opportunity exists for each individual to consider why he made accurate or inaccurate forecasts. What bases of inference were used? What possible sources were overlooked, de-emphasized, over-emphasized? Why? A place is to be found on the agenda for "autopsies" of

this kind. Here again the individual is permitted to act as judge of the disclosures that he is willing to make. Insight can also be fostered by an occasional scientific report of past forecasts and the factors that appear to account for them. For example, a significant relationship may exist between estimates which play up or down various categories of events, and age, sex, training, experience, personality traits, and other such factors. The scientific report of the proceedings provides data of importance regarding decision processes in general, and also contributes to the insight of present seminar members. In some instances it will be practicable to follow the response of members to the reports of past performance, which contributes another body of data to our presently insufficient knowledge of who is capable of improved predictive skill on the basis of information about his past performance.

(4) *The examining of new information.* Places on the agenda are needed for reports of trend, projections, and scientific factors. New information is also introduced as a by-product of other reports.

(5) *The clarification of goals and the evaluation of alternatives.* The agenda sometimes puts normative above designative considerations. The procedures outlined here do not lend themselves to theology or metaphysics; they do, however, permit specifications to be discussed according to general postulates. Alternative definitions can be compared with one another; and policy alternatives can be examined according to costs and gains in value terms.

IX

The items that appear on the agenda are adaptable to many special purposes. For instance, the forecasting of relatively immediate events may be an important feature of some seminars, though of very little significance for others. A seminar may deliberately limit its scope to long-range contingencies. During many sessions a given seminar may deal with historical trends or case studies, and put little emphasis upon the detailed projection of the future, or upon tightly formulated scientific or policy models. It often happens that no attempt is made to present a well-rounded

configurative approach during a given year, since new tools may need to be devised to provide a body of basic material.

Many special procedures can usefully be adapted to the total agenda of a seminar.

(1) *Individual and team projects.* There is ample scope for tasks which are appropriate to individual or group assignment. Individual tasks fall in relatively contrasting categories: somewhat routine undertakings; highly complex operations. The latter can be exploratory forays that result in the ultimate development of new methods or interpretations.

(2) *Guests.* Undoubtedly many seminars will find it worth while to invite individuals from outside the regular group to participate in the enterprise at various points along the line.

(3) *Policy games.* The principal aim of the technique of gaming is to provide practice in working alternative sequences through in detail. A number of variations can be used within the framework of a game. For instance, teams can be assigned to play particular roles for long periods in order to acquaint them fully with the perspective of the participant in question.

(4) *Policy exercises.* A war exercise differs from a war game in the degree of realism with which the operation is carried out. This distinction can be generalized to every instrument of policy—diplomatic, economic, communicative. Instead of remaining within conventional audio-visual and verbal limits the exercise may require the preparation of elaborate models, such as broadcasts, newspapers, and council chambers. Dramatic scripts can be worked out and presented as stage presentations or films. Local and regional plans can be modelled on a large scale.

(5) *Pre-tests.* As a means of obtaining more information on the basis of which to evaluate predispositions and alternatives of policy it is feasible to use the pre-test mechanism. This mechanism requires the introduction of a deliberate change in a given context, a change on a sufficiently small scale to avoid arousing latent opposition on a grand scale, thus preserving “control” groups.

(6) *Limited innovation.* Limited innovation is distinguishable from pre-test by the fact that the investigator is committed to a

policy. Innovations range from limited reporting to participation in all the ways known to politics. It is conceivable that active roles are combined with scientific observation and analysis of results, even though the danger of trying to combine scientific work with full-scale participation is apparent. The following is a sketch—incomplete obviously—of an ascending scale of participation: (a) a limited audience is presented with an analysis of policy alternatives, with no indication of preference; (b) a limited audience is provided with analysis and a proposal; (c) several rather special audiences in the community are presented with analyses and proposals; (d) general audiences are given an occasional report of analyses and recommendations; (e) vigorous propaganda is engaged in on behalf of policy proposals; (f) seminar participants run for office or use their authority in the community to put recommendations into effect.

X

Political science seminars have traditionally been conducted in splendid isolation from one another presumably out of deference to the Robinson Crusoe mentality of scholars. It will be a step forward when a great many seminars dealing with similar subject-matter or using the same methods are linked together. This is not togetherness for its own sake nor is it a proposal to weaken the quality of advanced education. On the contrary the chances are good that students and teachers will find themselves seized by new motivations since they can recognize the fact that they are part of a common undertaking whose pay-offs are immediate and intermediate as well as remote. Undoubtedly many seminars will continue to operate as relatively isolated units. Certainly there need be no disposition to induce teachers to enter into cooperative arrangements unless they are convinced of the net advantages of the step.

We indicated early in the present discussion that political scientists are substantially agreed about the vast scope of the subject, and perceive that an elaborate division of labor is an indispensable means of seeking to cope with the responsibilities involved. Furthermore, it is taken for granted that an effective system of communication is essential if individual members of the profession are

to keep informed of developments touching their own specialties, and to maintain a realistic map of the whole field.

No one will seriously dispute the point that existing modes of communication and collaboration within the profession leave much to be desired, and that these internal deficiencies have inimical effects upon relations between political scientists, officials and the general public. Only within the last few years, for example, have we begun to compile trend data concerning voting behavior; and the reporting is still largely non-existent at the local level, despite the obvious importance of sampling the "grass roots." We have occasional inventories of the pressure groups that operate at the federal level; but corresponding inventories are not published at regular intervals for the states and metropolitan areas. Obviously another body of invaluable information is not regularly reported, namely, pressure group demands regarding legislative, administrative and judicial action. Despite the growth of academic and practical interest in the media of communication polling results are not supplemented by public samples of politically significant content. Although it is usual to recognize the role of elite, mid-elite and rank and file characteristics we have no comprehensive data reporting operations at all echelons.

It requires little argument to establish the proposition that continuing seminars can voluntarily parallel their activities for the purpose of supplying many missing data as an incident of research training and theoretical analysis. Very likely the various professional associations can be called upon to perform a clearing house role in facilitating the development of systematic seminar programs. Each group of area and functional specialists within the profession can take the necessary initiatives for the advancement of their own subject.

As a brief reminder of the scope of the data pertinent to the analysis of decision processes at every level from the neighborhood to the world we may glance at a seven-fold classification of decision phases.

Prescription: The formulation of general rules of authoritative conduct. Trends in the prescribing function are reflected in such

information as innovations in constitutional rules, the flow of statutes, decrees and regulations.

Intelligence: The obtaining and processing of information and estimates for the use of decision makers. Trends in the intelligence function are indicated by such developments as the gathering of statistical data and qualitative descriptive reports, the making of estimates of the future, and the drawing up of tentative plans.

Recommendation: The active promotion of policy alternatives. Trends in the recommending function include the introduction of bills in legislative bodies, the advocacy of passage, and the organization and execution of party and pressure campaigns.

Invocation: The provisional application of a purported prescription to a concrete situation. Trends in the function of invocation cover the issuance of warnings, the making of arrests and the initiation of controversies.

Application: The final authoritative characterization of concrete circumstances in reference to prescriptions. Trends in application are shown in cases decided by the courts, and actions completed by civil and military forces.

Appraisal: The assessing of official actions according to the proclaimed or assumed objectives sought. Trends in the appraisal function include services of inspection and report.

Termination: The ending of prescriptions and of arrangements made in pursuance of prescriptions. Trends in termination are shown in acts of repeal, the ending of treaties and contracts, the dissolution of status relations.¹¹

In general terms we can say that the scope of the political scientist's responsibilities relates to the *system of public order* of any body politic at any time. By the public order is meant the funda-

¹¹ See Harold D. Lasswell, *The Decision Process; Seven Categories of Functional Analysis* (College Park, Md.: Bureau of Governmental Research, University of Maryland, 1956). Political scientists have available a number of new formulations of the decision process. In general consult Richard C. Snyder, "A Decision-Making Approach to the Study of Political Phenomena," in Young, *op. cit.*, pp. 3-38. As political scientists know, Herbert A. Simon is the creative figure in developing mathematical models to guide the study of decision.

mental pattern of value distribution and the basic institutions receiving legal protection. The legal order, of course, is part of the total system which it maintains.¹²

An inventory of institutional practices can be conveniently made for comparative purposes in terms of the following major value emphasis:

<i>Power:</i>	Governmental, legal, party institutions.
<i>Wealth:</i>	Economic institutions.
<i>Respect:</i>	Social class distinctions.
<i>Well-being:</i>	Practices related to safety, health, comfort.
<i>Enlightenment:</i>	Institutions gathering and disseminating information.
<i>Affection:</i>	Institutions of family, friendship and loyalty.
<i>Rectitude:</i>	Institutions specialized to religion, metaphysics, ethics.
<i>Skill:</i>	Practices pertaining to the acquisition and exercise of capabilities.

It is, of course, common to think of the U. S. as democratic, capitalistic, equalitarian, healthy, well-informed, monogamous, Judeo-Christian, technically and scientifically skilled. Detailed surveys are essential to spell out the public order system with full particularity.

XI

Although the principal theme of this article is that academic activities can be more adequately carried on by consolidating and improving the technique of decision seminars, we do not lose sight of the further uses of decision technique. The methods in question can be of great pertinence to the proper conduct of official and unofficial decision making at every level of community life, and in regard to every function.

¹² See M. S. McDougal and H. D. Lasswell, "The Identification and Appraisal of Diverse Systems of Public Order," *American Journal of International Law*, 53 (January, 1959), 1-29.

Consider, for example, the effective use of panels of expert advisors on foreign affairs. The usual routine is to bring area specialists together for occasional—or recurring—consultation, and while some advantages are derived from these meetings, the talent is not utilized as effectively as it can be. Part of the difficulty comes from failure to create a procedure by which insight can be built into the proceedings. Too often rhetorical skills are used to make enigmatic or evasive statements about future expectations. No doubt it is too much to expect that all experts will willingly subject themselves with perfect candor to all the procedures outlined above. Experts frequently depend upon some measure of mystique to maintain the confidence of those who rely upon them; and often the principal rival of the specialist is a neighboring specialist. With these facts of our rivalrous intellectual tradition in mind we have suggested a seminar technique in which precautions are taken to protect the anonymity of an expert who makes a particular forecast or modifies his estimates on the basis of discussion.

We learn to rely upon computing instruments in the furtherance of public policy, and it is no less important to learn the predispositions of the human beings whose judgment it is necessary to accept or reject in connection with the most vital steps of public action. Systematic records kept through the years cannot fail to provide information about the performance characteristics of whole panels of experts, and prepare a body of informed appraisal which reduces the likelihood of misplaced confidence under crisis conditions.¹³

XII

If the technique of decision seminars is to be brought to higher levels of effectiveness in the future it will be essential to engage in the accumulation of scientific knowledge about the operational characteristics of the system.

All the points that have been brought out concerning technique

¹³ The “social planetarium” idea, which is an application of decision seminar technique, can reach whole communities. See my discussion of “Strategies of Inquiry: The Rational Use of Observation,” in D. Lerner (ed.), *The Human Meaning of the Social Sciences* (New York: Meridian Books, 1959), pp. 89-113.

can be taken as hypotheses worthy of experimental study. I said above that a network of key seminars is required which are conceived as *continuing* enterprises; and this assertion can promptly be taken as a challenge to discover the factors contributing to the success or failure of "one shot" seminars when contrasted with "continuing enterprises." I also emphasized the presentation of the decision process under seminar study *as a whole and as continuous*. Here, too, questions abound. How can the "holistic approach" or the "segmented approach" be investigated to bring out their distinctive assets under what conditions?

We stressed the importance of using comprehensive conceptual schemes and audio-visual instrumentalities for the purpose of aiding the *recall* function, and also to stimulate *realistic imagination* and *critical judgment* of the implications of any specific innovation for the whole. On these points it is more obvious, perhaps, than in reference to the first question how tests of comparative effectiveness can be run.

As a means to wholeness we outlined the five types of intellectual *reports* relating directly to problem solving tasks: trend, scientific, projective, goal, policy. It is conceivable that optimum degrees of emphasis can be worked out for seminars that define their aims as paralleling organized decision bodies or selected functional phases of decision.

All the suggestions found in discussing the *agenda* of decision seminars lend themselves to systematic inquiry. For instance, how is realism of judgment (estimates of the future) affected by the filing of independent estimates and the ensuing discussion and revision? Who are those who show increased insight? How does this influence judgment?

So far as *special procedures* are concerned they too afford many opportunities for comparative investigation. To what extent is it true that "playing the umpire" is a consequence of policy games and exercises? To what extent can more dependable results be more quickly obtained by pitting teams against one another to argue on behalf of policy alternatives than by assigning team responsibility for inquiry and report, followed by general discussion? Can the factors that account for bias as a function of

one-sided exposure to a role be discovered and economically counteracted?

In general can the technique of conducting seminars be developed to such a point that a voluntary consensus on policy advice can be obtained from all groups regardless of their initial predispositions? ¹⁴

It is perhaps superfluous to go further in directing attention to these opportunities to exercise the function of appraisal upon the technique of the decision seminar. I conclude by prophesying that, since the political science profession is peculiarly responsible for subjecting the world decision process to analysis and appraisal, the many avenues of advance that have been opened up in recent years are preparing the way for a new outburst of creativity among us.

¹⁴ Partially relevant studies include the *Yale Studies in Attitude and Communication*, ed. by C. I. Hovland, 1957-; H. H. Kelley and J. W. Thibaut, "Experimental Studies of Group Problem-Solving and Process," in G. Lindzey (ed.), *Handbook of Social Psychology* (Cambridge, Mass.: Addison-Wesley Publishing Co., 1954), Vol. 2, Ch. 21; E. R. Hilgard, "Creativity and Problem-Solving," in H. H. Anderson (ed.), *Creativity and Its Cultivation* (New York: Harper, 1959), Ch. 11.